



US009638487B1

(12) **United States Patent**  
**Liu**

(10) **Patent No.:** **US 9,638,487 B1**  
(45) **Date of Patent:** **May 2, 2017**

(54) **SPANNING DEVICE FOR CROSSBOWS**

(71) Applicant: **POE LANG ENTERPRISE CO., LTD.**, Taichung (TW)

(72) Inventor: **Chi-Chang Liu**, Taichung (TW)

(73) Assignee: **Poe Lang Enterprise Co., Ltd.**, Taichung (TW)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **15/344,910**

(22) Filed: **Nov. 7, 2016**

(51) **Int. Cl.**  
**F41B 5/12** (2006.01)

(52) **U.S. Cl.**  
CPC ..... **F41B 5/12** (2013.01)

(58) **Field of Classification Search**  
CPC ..... **F41B 5/12**  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

3,670,711 A \* 6/1972 Firestone ..... F41B 5/12  
124/25  
3,783,852 A \* 1/1974 Shepherd ..... F41B 5/12  
124/22

4,649,892 A \* 3/1987 Bozek ..... F41B 5/10  
124/25  
4,719,897 A \* 1/1988 Gaudreau ..... F41B 5/1469  
124/25  
4,942,861 A \* 7/1990 Bozek ..... F41B 5/12  
124/25  
5,215,069 A \* 6/1993 Liu ..... F41B 5/12  
124/25

\* cited by examiner

*Primary Examiner* — John Ricci

(74) *Attorney, Agent, or Firm* — Rosenberg, Klein & Lee

(57) **ABSTRACT**

A spanning device of a crossbow includes a barrel, an action unit and an spanning unit. A space is defined in the barrel. A limb is connected close to the front end of the barrel. A string is connected between two ends of the limb. The action unit slidably located in the space and has a portion exposed from the space. The action unit has a slide, a restriction member, a safety member, a hook member and a trigger. The restriction member, the safety member, the hook member and the trigger are connected to the slide which is slidably engaged with the space. The spanning unit has a pull rod, a pivotal rod and a first link. The spanning unit drives the action unit to move in the space, so that when the hook member hooks the string, the string is easily pulled with less effort.

**8 Claims, 11 Drawing Sheets**

